

**DENR Administrative Order
No. 96-27
September 18, 1996**

**SUBJECT : Amending Department
Administrative Order No. 44 Series
of 1990.**

Pursuant to Executive Order No. 192 which mandates the Department of Environment and Natural Resources (DENR) as the primary government agency responsible for the sustainable development of the country's environment and natural resources, and in order to effectively manage its research and development tasks, Department Administrative Order No. 44 Series of 1990 is hereby amended and shall read as follows:

Sec. 1 Statement of Policies

It is the policy of the Department that Research and Development (R & D) activities shall be focused on the most urgent, high priority areas defined to ensure a more rationalized disposition and efficient utilization of the country's natural resource sin consonance with the policy focus on ecological balance, ecosystems productivity, equity and social justice. Furthermore, R & D shall also provide the necessary technological backstopping to push development forward in line with the government's desire to maintain the momentum of development in the Philippine economy.

Sec. 2 Objectives

To establish policies on R & D management systems towards the attainment of a more effective and efficient way of preparing, implementing, evaluating and monitoring DENR R & D activities.

Sec. 3 Definition of Terms

- 3.1 National Research and Development Framework - spells out the general direction for the various integrated ecosystems approach programs and identifies the priority areas or gaps requiring attention. It guides the research sector in formulating activities that are problem and clientele-oriented and should contribute to the overall national as well as regional development goals.
- 3.2 Research Thrusts/Priority Areas - refer to the specific research thrusts/priority areas of the region which were identified in the National and Regional R and D Agenda.
- 3.3 Ecosystems Approach - pertains to holistic, integrated, and interdisciplinary undertakings.
- 3.4 Commodity Approach - pertains to a single discipline or commodity undertaking.
- 3.5 Ecosystem Research and Development - is an organized, systematic and scientific search for knowledge leading to an understanding of the relationship or interaction of one component with the other components for the protection, rehabilitation, utilization and appropriate management of ecosystems.
- 3.6 Basic Research - is the experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, with no particular application or use in view.
- 3.7 Applied Research - is an original or verificatory investigation undertaken to acquire new knowledge and is directed primarily

towards a specific aim or objective to resolve a particular problem.

- 3.8 Research Proposal - is a document which defines clearly the objectives/targets; establishes the time frame and strategy of actions and specifies the resources required to attain the objectives. This is broadly classified into program, project and study.
 - 3.8.1 A program involves a group of interrelated or complementing research projects on a multi-disciplinary approach to meet established goals within a specific time frame.
 - 3.8.2 A project is a set of interrelated studies or a component of a program to meet pre-determined objectives within a specific timeframe.
 - 3.8.3 A study is a basic unit in the investigation of a specific problem identified under a project. A study could either be classified as short term, or long term. A study shall be classified as short term if it has a duration of a year or less, otherwise, the study shall be classified as long term.
- 3.9 Technology - may be a product, service, information, system, method or technique which when utilized contributes towards the enhancement of the productivity, income and general welfare of specific group of individuals.
- 3.10 Technology Generation - is the process of conducting research with the primary aim of solving specific problems previously identified. It includes reporting of results obtained.

- 3.11 Technology Verification - is the conduct of further verification research to test and/or refine previously generated technology on a small (pilot) or large (commercial) scale.
- 3.12 Technology Transfer - is the process of moving the results of research from the generator to the end-user.
- 3.13 Packaging of technology - is the means of processing the information or technology in conformity with established form, content and language appropriate for acceptance and adoption of the technology by the target clientele.
- 3.14 Dissemination of packaged technology - is the process of bringing the packaged technology to the intended end-user through a selected medium (e.g. print, television, radio, etc.).
- 3.15 National Agriculture and Resources Research and Development Network (NARRDN) - is an R & D network established and managed by the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) with the task of promoting coordination and linkages among agencies and institutions in agriculture, forestry and natural resources sectors.
- 3.16 DENR R & D Network - comprises of ERDB, ERDS, and other DENR offices and units i.e., Mines and Geosciences, Environmental Management, Protected Areas and Wildlife Sectors/Bureaus, conducting research and development.
- 3.17 Field evaluation - is an activity, the purpose of which is to evaluate results, progress and problems of research activities in the field. This activity is a component of the annual in-house review.

- 3.18 In-house review - is an annual activity with the end-in-view of evaluating results, highlights, and problems of research undertaking and recommend appropriate actions for improved research identification or implementation.
- 3.19 ERDB Technical Review Board (ETRB) - is the highest technical body responsible for the monitoring and evaluation of the R and D activities undertaken by the DENR R and D network. It is composed of the ERDB Assistant Director who acts as Chairman and the technical division Chiefs who are referred to as Program Managers (PMs) as members.
- 3.20 Program Manager (PM) - is the term referred to the member of the ERDB Technical Review Board. He is responsible for managing an ecosystem or programs i.e. forest, upland farm, grassland and degraded areas, coastal zone and freshwater, urban and technology transfer.
- 3.21 Regional Research and Development Consortium - serves as a mechanism for joint planning, coordinating, monitoring, evaluating and sharing of resources of member agencies in conducting R and D activities at the regional level. The organization of regional research centers and stations into a consortium was advocated and instituted by PCARRD. At present, there are 13 regional research and development consortia in the country.

Sec. 4 Research Management System

4.1 Development of the R and D Agenda

Setting directions for research is one of ERDB's primary functions. ERDB must ensure the formulation of a well-defined National R and D network.

The formulated R and D agenda shall be reviewed and updated as the need arises through a series of regional consultation/workshop.

4.2 Research and Development Network

The DENR R and D network shall serve as a mechanism to effectively link offices in the department, each with their respective R and D activities. ERDB shall be the central research coordinating body of the Department, responsible for the coordination, monitoring and evaluation of all R and D activities in the Department. ERDS shall undertake R and D activities on specific and priority areas of investigation within their territorial jurisdiction, while ERDB and other DENR research units shall implement basic researches, applied researches which are nationwide in scope and where the technical expertise required is not available in the ERDS.

Both ERDB and ERDS shall represent the Department in the National Agriculture and Resources Research and Development Network (NARRDN).

4.3 Components of the R & D Proposal

The research thrusts/priority areas identified in the National and Regional R and D agenda shall serve as the basis for preparing research proposal.

To ensure inclusion of salient points in the proposal and to facilitate the review and evaluation processes, the standard format for the preparation of long and short term proposals is shown in Appendix Form No. 1. The components of a research proposal are as follows:

- 4.3.1 Title - This should describe the work scope in specific, clear and concise terms.
- 4.3.2 Importance/Significance of the Study - This contains the rationale in undertaking the study and the benefits obtainable from the expected results.
- 4.3.3 Review of literature - the proposal should be supported by significant recent findings from local and appropriate foreign literatures to elucidate the gaps that the proposal tries to fill up.
- 4.3.4 Objectives - This should be stated clearly and logically in a realistic and attainable way considering the resources available (manpower, facilities, money) and methods employed.
- 4.3.5 Methodology - This should clearly define and discuss in detail the manner in which the desired objectives could be achieved.
- 4.3.6 Activity Schedule - This includes the specific group of activities in chronological order at various phases of the

study and is presented by simple timetables, graphs or charts.

- 4.3.7 Budget Schedules - The budgetary requirements of major items should be presented in detail broken down on quarterly basis for 1 year and total cost on a yearly basis if proposal extends beyond a year. The major cost items are personal services, maintenance and operating expenses (i.e. traveling expenses, supplies and materials and sundry items, etc.) and capital outlay.

Sec. 5 Qualification of Research Leaders

Qualification and capability of the proponent shall be considered in the formulation and implementation of a research proposal. Qualification refers to the level of education while capability refers to the competence of personnel in handling the research study. Only personnel who occupy permanent positions shall be allowed to handle program/project/study leadership. The specialist group whose exposure and experience is directly relevant to the proposal under study may be allowed to assume study/project leadership. Program leadership/coordinatorship shall be given to personnel who specialize in a certain field of study.

Research Assistant occupying a permanent position may assume study leadership provided that he has the necessary qualifications and capabilities as recommended by his immediate superior and approved by the Regional Technical Director for Research or the agency head.

Research Assistant group, staff of PENRO/CENRO and other qualified personnel under plantilla/job contract may act as co-worker in the preparation and conduct of the study.

Sec. 6 Processing and Evaluation of R & D Proposals

A research proposal undergoes the following process and evaluation system before it is approved for implementation:

6.1 Research proposals originating from the ERDS

6.1.1 These proposals shall undergo a thorough review by the Regional Technical Director for Research (RTD). For short term research proposals, the RTD shall submit the same to the Regional Executive Director (RED) for approval and funding. For long term research proposals, the RTD shall submit the same, in six copies to the RED for endorsement to ERDB for evaluation. Such proposals, however, may be referred to the regional research and development consortium to check overlapping or duplication with any on-going, completed or submitted proposals within the region.

6.1.2 At ERDB, the proposal shall be thoroughly reviewed by at least two (2) members of the ERDB Pool of Evaluators which is composed of experts on the subject. If the proposal needs revision or modification after the evaluation, ERDB through its Planning Unit, shall transmit the consolidated comments prepared by the program manager to the proponent for revision/incorporation, within a month upon receipt of proposal. In case of conflict of comments and suggestions of evaluators, the evaluators shall sit en banc to resolve the conflict.

- 6.1.3 The proponent revises the proposal based on the consolidated comments and then transmits the revised proposal to ERDB for re-evaluation.
 - 6.1.4 The designated evaluators mentioned in 6.1.2 together with the program manager shall review the revised proposal to see to it that the comments have been incorporated in the proposal. In some instances, the proponent may discuss the matter with the evaluators or submit a reaction letter if he does not agree with the whole or a portion of the evaluation report.
 - 6.1.5 After the proposal passes the evaluation process, the ERDB Director endorses the proposal to PCARRD or any funding agency for clearance/approval and funding. In cases where fund source is from the general appropriation of the regional office, the ERDB Director shall endorse the proposal to the Regional Executive Director for approval. Only proposals which pass the evaluation on or before the 3rd week of September of the current year are eligible for inclusion in the R & D activities for the following budget year, except proposals which are expedient in nature as determined by the ETRB and approved by the ERDB Director.
- 6.2 ERDB initiated proposals shall be reviewed and evaluated by both the Section Chief and Division Chief of the proponent. After thorough review, the Division Chief shall endorse the proposal to the Director for evaluation following the guidelines described in Sections 6.1.2 or 6.1.5. When fund source is the general appropriation of the Bureau, the ERDB Director shall approve the proposal.

- 6.3 R & D proposals prepared by other research units of DENR shall undergo the same process following the system described in 6.1.2 to 6.1.5 of Section 6.
- 6.4 R and D proposal prepared by other research institutions/organizations and submitted to DENR for funding shall also undergo the above described processes of evaluation, and the ERDB Director shall endorse it through the Undersecretary for Environment and Programs development to the Secretary for approval and possible funding.
- 6.5 The R & D Projects Proposal Evaluation System is shown in Appendix Figure 1.

Sec. 7 Implementation of R and D Programs Projects/Studies

- 7.1 As specified in Section 4.2, ERDB shall implement basic and applied researches which are nationwide in scope while ERDB shall implement programs/projects/studies within their respective territorial jurisdiction.
- 7.2 Upon consultation with the involved research units, ERDB may deploy equipment and other logistic/requirements subject to approval by the Undersecretary for Environment and Programs Development and the Undersecretary for Field Operations.
- 7.3 ERDB may implement a project/study in a region when such region has no technical expertise as certified either by the Regional Executive Director or the Regional Technical Director.

- 7.4 ERDB shall provide technical assistance to ERDS in the implementation phase of the study in case expertise is lacking in the region. Prior to implementation, the proponent through the RED shall submit to ERDB a schedule of implementation together with a copy of the approved proposal.
- 7.5 It shall be the responsibility of the RED/RTD and the assigned ERDB evaluator to see to it that programs/projects/studies are implemented based on the approved project design and scheme of implementation.
- 7.6 Appendix Figure 2 shows the R & D project implementation system for the DENR R & D Network.

Sec. 8 Reports

- 8.1 All programs/project/study leaders of the DENR R and D Network shall submit to ERDB the quarterly Work and Financial Plan on a study basis following Appendix Form No. 4 and narrative quarterly and year-end accomplishment reports following Appendix Form Nos. 2 and 3 for monitoring and evaluation purposes. Quarterly and year-end reports shall reach the ERDB every first week of the ensuing quarter and year, respectively. Likewise, ERDS shall furnish ERDB a copy of pertinent documents such as a copy of the proposals in the pipeline together with its status, on-going studies (in case the proposals and on-going studies which did not pass ERDB's evaluation mechanism) terminal reports of completed studies following Appendix Form No. 5 and results of evaluation being conducted by the evaluators other than ERDB.

ERDB shall consolidate all reports of ERDS and submit consolidated reports to the Secretary before the 15th of the ensuing quarter or year.

- 8.2 Research undertaken by other agencies outside of the DENR R and D Network but funded by DENR shall submit report to the Undersecretary for Environment and Programs Development (copy furnished the ERDB).
- 8.3 The Reporting System for the DENR R & D Network is shown in Appendix Figure 3.

Sec. 9 Monitoring and Evaluation of R and D Activities

ERDB shall spearhead the conduct of a yearly field evaluation and in-house review of previous year's ongoing and completed program/project/study of DENR R & D Network.

The members of the evaluation Team shall come from DENR R & D Network. Representatives from member agencies of NARRDN, Planning and Policy Studies Office and Foreign Assisted and Special Projects Office of the DENR shall be invited to participate the in-house reviews.

- 9.1 The evaluation team shall report findings on the implementation of the program/project/study and recommend solutions to the problems/difficulties encountered.
- 9.2 The team may also recommend continuation or termination of the program/project/study based on the findings of the evaluation. Major revisions requiring changes in the organizational structure, methodology and termination of the program/project/study, etc. shall be decided upon by the

funding or approving agency. The Regional Technical Director for Research representing the Regional Executive Director or the ERDB Director, as the case may be, may decide on minor revisions recommended for the program/project/study. The researcher concerned shall be furnished a copy of the evaluation report.

9.3 In cases of termination or suspension, deferment or shortening of duration of program/project/study funded under the General Appropriations, any such action need the concurrence and approval of the ETRB and the ERDB Director, respectively. For ERDB, the Regional technical Director for Research for ERDS and the head of the research units for other DENR Bureaus. If funded by other agencies; such actions need their concurrence and approval of the funding agency and the agency head.

9.4 Upon termination/completion of research program/project/study, the proponent/research leader shall submit to ERDB six (6) copies of the terminal report following Appendix Form No. 5. Said terminal report shall undergo similar evaluation process as stipulated in Sections 6.1.2 to 6.1.4.

Terminal reports recommended for publication shall be forwarded by ETRB to the Technology Development Division (TDD) to assess the appropriateness as to the type of and format of publication. Upon advice of ETRB and TDD, the proponent shall revise and submit the terminal report in publishable form to TDD for review by the DENR-ERDB Editorial Board. The TDD shall forward the comments of the Editorial Board to the proponent as basis for further revision. After the Editorial Board shall have approved for publication the revised version of the terminal report, the TDD shall

edit/refine and publish the terminal report and disseminate the publication to the DENR offices and other clientele.

However, if the terminal report has been found by ETRB not worthy for publication, the revised version of said report shall be kept on file at PMISU for data banking and other purposes.

The Monitoring and evaluation System of Ongoing and Completed R & D Projects/Studies for the DENR R & D Network is shown in Appendix Figure 4.

Sec. 10 Research Management Information Systems (RMIS)

ERDB shall develop and maintain a Research Management Information System (RMIS) for the DENR R and D network. It shall be capable of supporting on-line data entry for updating and inquiry on the research project and/or about any project in the file and shall consist of 2 sub-systems:

- 10.1 Data bank for all terminal reports/abstracts of completed researches and human resources of the DENR R and D Network.
- 10.2 Research Monitoring System developed to control and monitor files of proposals, new and ongoing research programs/projects/studies including all relevant budgetary, personnel and logistics information.

ERDB, through its Planning and Management Information Services Unit, shall spearhead the development of the RMIS and shall be responsible in the training of the regional staff in implementation of the system in their respective offices in

coordination with the DENR Human Resources Development Unit.

Sec. 11 Technology Transfer

Technology derived through research should be compiled, classified and translated into packaged technology in the kind of a language that is understood by the target clientele.

- 11.1 Members of the DENR R and D Network shall be responsible for the compilation, classification, organization and integration of technology derived from their respective territorial jurisdiction while technology from national and international sources shall be the main concern of ERDB.
- 11.2 Documentation through writing, use of photos/slides, radio/T.V. coverage, and/or video/cassettes of topics of regional coverage shall be the task of the members of the DENR R & D Network while ERDB shall deal on topics of national concern or coverage.
- 11.3 Research results/technologies shall be packaged for printing (such as newsletter, journal, how to's), broadcast on Radio/T.V., or Audio-visuals.

ERDB shall be responsible for the publication of Canopy, and the Sylvatrop Journal which is a DENR technical journal, How to's , and RISE. On the other hand, Regional DENR newsletter , Techno Transfer Bulletin, ERDS Research Digest and translated versions of How to's and RISE shall be the main concern of the members of DENR R and D Network. Furthermore, research results for technical publications shall be submitted to ERDB for review and publication.

- 11.4 Members of DENR R and D Network shall spearhead the dissemination of information/extension work/establishment of demonstration farms in their respective territorial jurisdiction.
- 11.5 Members of the DENR R and D Network shall monitor and evaluate the adoption of technologies by the target clientele. They shall be responsible for institutionalizing a mechanism for feedback and impact assessment on the results of researches or technology developed.

Unlike ERDS which shall cover technologies of regional coverage, ERDB on the other hand, shall take charge of technologies which are national in scope.

- 11.6 The DENR shall retain proprietary rights over the results of completed researches, or parts thereof. Dissemination, publication, or commercialization of such can only be effected with the express permission of the DENR.

Sec. 12 Repealing Clause

All Orders, Circulars, Memoranda and other issuances which are inconsistent herewith are hereby revoked, amended or modified accordingly.

Sec. 13 Effectivity

This order takes effect immediately.

VICTOR O. RAMOS
Secretary